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**United States Patent** [19]

Walse et al.

[11] **Patent Number:** **6,015,299**[45] **Date of Patent:** **Jan. 18, 2000**[54] **CARD EDGE CONNECTOR WITH SYMMETRICAL BOARD CONTACTS**[75] Inventors: **Alan S. Walse, LaGrange; Harold Keith Lang, Fox River Grove; Augusto P. Panella, Naperville; Irvin R. Triner, Willowsprings, all of Ill.; Shyh-Lin Tung, Taiping, Taiwan**[73] Assignee: **Molex Incorporated, Lisle, Ill.**[21] Appl. No.: **09/120,485**[22] Filed: **Jul. 22, 1998**[51] Int. Cl.<sup>7</sup> ..... **H01R 9/09**[52] U.S. Cl. .... **439/60**[58] Field of Search ..... **439/60, 637, 636**[56] **References Cited****U.S. PATENT DOCUMENTS**

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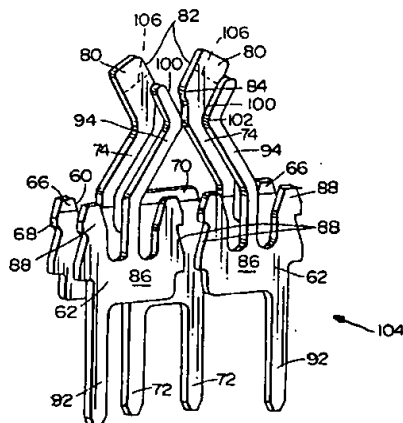
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*Primary Examiner*—Neil Abrams*Assistant Examiner*—Javaid Nasri*Attorney, Agent, or Firm*—Charles S. Cohen[57] **ABSTRACT**

A card edge connector for mounting on a circuit board and removeably receiving a circuit card includes an elongated housing defining a card receiving slot. Numerous terminal receiving cavities intersect and extend to both sides of the slot. Alternate cavities include stamped reference (ground or power) terminals and signal terminals, all having downwardly extending board contacts and upwardly extending spring arms. There are numerous similar sets of face to face contacts, each including a reference contact parallel to and substantially overlying an opposed pair of signal contacts. The upwardly extending reference terminal spring arms include oversize pad portions for reducing crosstalk by increasing coupling between the reference and signal terminals. The circuit paths to the circuit board are in an array symmetrical about the centerline of the circuit card, with parallel inner lines of circuits containing only reference contacts and outer lines of circuits containing only signal contacts.

**23 Claims, 3 Drawing Sheets**

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